AMENDMENTS TO THE CLAIMS

Docket No.: 0102258.00175US2

What is claimed is:

1. (Currently Amended) A compound of Formula (I), or a pharmaceutically acceptable salt thereof,

(I)

wherein:

R_b is a hydrogen or a lower alkyl group;

D is a hydrogen, V₃ or K;

U₃ is oxygen;

 $K \ is -(W_3)_a - E_b - (C(R_e)(R_f))_{p1} - E_c - (C(R_e)(R_f))_x - (W_3)_d - (C(R_e)(R_f))_y - (W_3)_i - E_j - (W_3)_g - (C(R_e)(R_f))_z - U_3 - V_3;$

 V_3 is a hydrogen or -NO₂;

a, b, c, d, g, i and j are each independently an integer from 0 to 3;

p₁, x, y and z are each independently an integer from 0 to 10;

 W_3 at each occurrence is independently -C(O)-, -C(S)-, -T₃-, -(C(R_e)(R_f))_h-, an alkyl group, or -(CH₂CH₂O)_{q1}-;

E at each occurrence is independently -T₃-, an alkyl group, an aryl group,

 $-(C(R_e)(R_f))_h$ -, or $-(CH_2CH_2O)_{q1}$ -;

 T_3 at each occurrence is independently a covalent bond, a carbonyl, an oxygen, or $-N(R_a)R_i$; h is an integer form 1 to 10;

q₁ is an integer from 1 to 5;

 R_e and R_f are each independently a hydrogen, an alkyl, a eyeloalkoxy $R_{54}O_-$, a halogen, a hydroxyl -OH, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring, an alkylaryl, an

alkylcycloalkyl, an alkylheterocyclic ring, a cycloalkylalkyl, a cycloalkylthio $R_{54}S_{-}$, an arylalklythio, an arylalklythioalkyl, an alkylthioalkyl, a cycloalkenyl, an heterocyclicalkyl, an alkoxy R₅₀O-, a haloalkoxy, an amino, an alkylamino R₅₀NH-, a dialkylamino R₅₂R₅₃N-, an arylamino R55NH-, a diarylamino R55R60N-, an alkylarylamino R52R55N-, an alkoxyhaloalkyl, a sulfonic acid -S(O)₂OR₇₆, a sulfonic ester -S(O)₂OR₅₈, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio $R_{50}S_{-}$, an arylthio $R_{55}S_{-}$, a cyano -CN, an aminoalkyl, an aminoaryl, an aryl, an arylalkyl, an alkylaryl, a carboxamido $-C(O)N(R_{51})(R_{57})$, a alkylcarboxamido, an arylcarboxamido, an amidyl R₅₁C(O)N(R₅₇)-, a carboxyl -C(O)OR₇₆, a carbamoyl -O- $C(O)N(R_{51})(R_{57})$, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl R_{52} -C(O)-, an arylearbonyl R_{55} -C(O)-, an ester R_{51} C(O) R_{76} -, a carboxylic ester -C(O)O R_{58} , an alkylearboxylic ester, an arylcarboxylic ester, a sulfonamide $-S(Q)_2-N(R_{51})(R_{57})$, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl R_{50} - $S(O)_2$ -, an alkylsulfonyloxy R_{50} - $S(O)_2$ -O-, an arylsulfonyl R_{55} -S(O)₂-, arylsulphonyloxy R_{55} -S(O)₂-O-, a sulfonic ester -S(O)₂OR₅₈, an alkyl ester, an aryl ester, a urea $-N(R_{59})-C(O)N(R_{51})(R_{57})$, a phosphory $-P(R_{70})(R_{71})(R_{72})$, a nitro $-NO_2$ or K; or R_e and R_f taken together with the carbons to which they are attached form a carbonyl -C(O), a methanthial $\underline{-C(S)}$ -, a heterocyclic ring, a cycloalkyl group, an aryl group, an oxime $\underline{=N-OR_{81}}$, a hydrazone $\underline{=N-OR_{81}}$ $N(R_{81})(R'_{81})$ or a bridged cycloalkyl group;

R₅₀ is an alkyl group;

 R_{51} , R_{57} , and R_{59} are each independently a hydrogen atom, an alkyl group, an aryl group or an arylheterocyclic ring, or R_{51} and R_{57} taken together are a heterocyclic ring, a cycloalkyl group or a bridged cycloalkyl group;

R₅₂ and R₅₃ are each independently an alkyl group;

R₅₄ is a cycloalkyl group or a bridged cycloalkyl group;

R₅₅ and R₆₀ are each independently an aryl group;

R₅₈ is an alkyl group, an aryl group, or an aryl heterocyclic ring;

R₇₀ is a lone pair of electrons, thial or oxo;

R₇₁ and R₇₂ are each independently a covalent bond, a hydrogen, a lower alkyl, an alkoxy, an alkylamino, a hydroxy, an oxy or an aryl:

R₇₆ is a hydrogen, an organic cation or an inorganic cation;

R₇₆ is oxygen or sulfur;

R₈₁ is a hydrogen, an alkyl group, an aryl group, an alkylsulfonyl group, an arylsulfonyl group, a carboxylic ester, an alkylcarbonyl group, an arylcarbonyl group, a carboxamido group, an alkoxyalkyl group or an alkoxyaryl group;

R'81 is independently selected from R81;

R_a is a lone pair of electrons, a hydrogen or an alkyl group;

 R_i is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl, - CH_2 - $C(U_3$ - $V_3)(R_e)(R_f)$, a bond to an adjacent atom creating a double bond to that atom, - $(N_2O_2$ - $)^ M_1^+$, wherein M_1^+ is an organic or inorganic cation; and

with the proviso that the compounds of Formula (I) must contain least one of a nitrate or a thionitrate group.

- 2. (Currently Amended) A <u>pharmaceutical</u> composition comprising the compound of claim 1 and a pharmaceutically acceptable carrier.
 - 3. (Cancelled)
 - 4. (Previously Presented) The compound of claim 1, wherein K is:
 - $(1) Y (CR_4R_4')_p T (CR_4R_4')_p ONO_2;$
 - $(2) Y (CR_4C_4')_p V B T (CR_4R_4')_p ONO_2;$
 - $(3) Y (CR_4R_4')_p T C(O) (CR_4R_4')_k (CH_2) ONO_2;$
 - $(4) Y (CR_4R_4')_p C(Z) (CH_2)_q T (CR_4R_4')_q (CH_2) ONO_2;$
 - $(5) Y (CR_4R_4')_p T (CH_2)_q V (CR_4R_4')_q (CH_2) ONO_2;$
 - $(6) Y (CR_4R_4')_p V (CH_2)_q V (CR_4R_4')_q (CH_2) ONO_2;$
 - $(7) Y (CR_4R_4')_k (W)_q (CR_4R_4')_k (CH_2) ONO_2;$
 - $(8) -NR_i-O-(CH_2)_k-V-(CR_4R_4')_q-(CH_2)-ONO_2;$
 - $(9) -NR_i-O-(CH_2)_k-(W)_0-(CR_4R_4')_0-(CH_2)-ONO_2;$
 - $(10) -O-NR_i-(CH_2)_k-(W)_q-(CR_4R_4')_q-(CH_2)-ONO_2;$
 - $(11) Y (CH_2)_k (W)_q (CH_2)_k V (CR_4R_4')_k Q' (CR_4R_4')_k (CH_2) ONO_2;$

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- $(12) Y (CR_4R_4)_p V (CH_2)_k (W)_q (CR_4R_4)_q (CH_2) ONO_2;$
- $(13) -O-NR_i-(CH_2)_k-V-(CR_4R_4')_q-(CH_2)-ONO_2;$
- $(14) Y (CR_4R_4')_k Q' (CR_4R_4')_k V (CR_4R_4')_k (CH_2) ONO_2;$
- $(15) Y (CR_4R_4)_k Q' (CR_4R_4)_k (W)_q (CR_4R_4)_k (CH_2) ONO_2;$
- $(16) Y (CR_4R_4')_p T (CR_4R_4')_p Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(17) Y (CR_4R_4')_a C(Z) (CR_4R_4')_k (CH_2) ONO_2;$
- $(18) Y (CR_4R_4')_p Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(19) Y (CR_4R_4')_q P(O)MM';$
- $(20) Y (CR_4R_4')_k Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(21) Y (CR_4R_4')_k Q' (CR_4R_4')_k T (CR_4R_4')_k (CH_2) ONO_2;$
- $(22) Y (CR_4R_4')_0 (W)_0 (CR_4R_4')_k Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(23) Y (CR_4R_4')_q V (CR_4R_4')_k Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(24) Y (CR_4R_4')_p (T)_o (W)_q (CR_4R_4')_k (CH_2) ONO_2;$
- $(25) Y (CR_4R_4)_p (W)_q (T)_0 (CR_4R_4)_k (CH_2) ONO_2;$
- $(26) Y (CR_4R_4)_0 C(Z) V (CR_4R_4)_0 (CH_2) ONO_2;$
- $(27) Y (CR_4R_4')_k C(R_4)(ONO_2) (CR_4R_4')_q (T)_0 (W)_q (T)_0 (CR_4R_4')_k R_5;$
- $(28) Y (CR_4R_4')_k V (CR_4R_4')_k Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(29) Y (CR_4R_4')_0 C(Z) Q' (CR_4R_4')_k (CH_2) ONO_2;$
- $(30) Y (CR_4R_4')_p V (CR_4R_4')_p (CH_2) ONO_2;$
- $(31) Y (CR_4R_4')_p V (CH_2)_q (T)_o (CR_4R_4')_q (CH_2) ONO_2;$
- $(32) Y (CR_4R_4')_p (T)_o Q' (T)_o (CR_4R_4')_q (CH_2) ONO_2;$
- $(33) Y (CR_4R_4)_q C(Z) (CR_4R_4)_q V (CR_4R_4)_k Q' (CR_4R_4)_k (CH_2) ONO_2;$
- $(34) Y (CR_4R_4)_0 C(Z) (CR_4R_4)_0 (W)_0 (CR_4R_4)_k Q' (CR_4R_4)_k (CH_2) ONO_2;$
- $(35) NR_i O (CH_2)_k V (CR_4R_4')_k Q' (CH_2) ONO_2;$
- $(36) NR_i O (CH_2)_k (W)_0 (CR_4R_4)_k Q' (CH_2) ONO_2;$
- $(37) -O-NR_{i}-(CH_{2})_{k}-(W)_{q}-(CR_{4}R_{4}')_{k}-Q'-(CH_{2})-ONO_{2};$
- $(38) -O-NR_i-(CH_2)_k-V-(CR_4R_4')_k-Q'-(CH_2)-ONO_2;$
- $(39) NR_j NR_j (CR_4R_4')_p (W)_q (T)_o (CR_4R_4')_k (CH_2) ONO_2$; or
- $(40) Y (CR_4R_4)_k Q' (CR_4R_4)_k ONO_2$; or

$$(41) - Y - (CR_4R_4')_k - V - (CR_4R_4')_k - Q - (CR_4R_4')_k - ONO_2;$$

R₄ and R₄' at each occurrence are independently a hydrogen, lower alkyl group,

-OH, -CH₂OH, -ONO₂, -NO₂ or -CH₂ONO₂;

W is a covalent bond or a carbonyl group;

T at each occurrence is independently an oxygen, or NR_i;

R_j is a hydrogen, an alkyl group, an aryl group, a heterocyclic ring, an alkylcarbonyl group, an alkylaryl group, an alkylsulfinyl group, an alkylsulfinyl group, an arylsulfinyl group, an arylsulfinyl group, a N-alkylsulfonamido group, a N,N-diarylsulfonamido group, a N-arylsulfonamido group, a N-arylsulfonamido group, a N-alkyl-N-arylsulfonamido group, a carboxamido group or a hydroxyl group;

p at each occurrence is independently an integer from 1 to 6;

q at each occurrence is independently an integer from 1 to 3;

o at each occurrence is independently an integer from 0 to 2;

k at each occurrence is independently an integer from 0 to 4;

Y is independently a covalent bond, a carbonyl, an oxygen, -S(O)₀- or -NR_i;

B is either phenyl or $(CH_2)_0$;

Q' is a cycloalkyl group, a heterocyclic ring or an aryl group;

Z is (=O), (=N-OR₅), (=N-NR₅R'₅) or (= $CR_5R'_5$);

M and M' are each independently -O H_3N^+ -($CR_4R'_4$)_q- CH_2ONO_2 or -T-($CR_4R'_4$)_k- CH_2ONO_2 ; and

R₅ and R₅' at each occurrence are independently a hydrogen, a hydroxyl group, an alkyl group, an aryl group, an alkylsulfonyl group, an arylsulfonyl group, a carboxylic ester, an alkylcarbonyl group, an arylcarbonyl group, a carboxamido group, an alkoxyalkyl group, an alkoxyaryl group, a cycloalkyl group or a heterocyclic ring.

5. (Currently amended) The compound of claim 1, wherein K is:

(12)
$$R_{\epsilon}$$

$$N_{ij}$$

$$N_{ij}$$

$$N_{ij}$$

$$N_{ij}$$

$$N_{ij}$$

(19)
$$(P_8)_2$$

$$(P_8)_2$$

$$NO_2$$

$$(20)$$

$${}^{3} \underset{}{\overset{X}{\sim}} \underset{}{\overset{X}{\sim}} \underset{n'}{\overset{X}{\sim}} \underset{n'}{\overset{X}{\sim}} \underset{m'}{\overset{X}{\sim}} \underset{n'}{\overset{X}{\sim}} \underset{m'}{\overset{X}{\sim}} \underset{m'}{\overset{X$$

(23)
$$\begin{array}{c} (23) \\ (23)$$

(28)
$$T \longrightarrow NO_2$$

$$NO_2$$

wherein:

Y' a covalent bond, a carbonyl, an oxygen, or -NR₆;

T' is oxygen, or NR₆;

X₅ is oxygen, or NR₆;

R₆ is a hydrogen, a lower alkyl group, an aryl group;

R₇ is a lower alkyl group or an aryl group;

R₈ at each occurrence is independently [[is]] a hydrogen, a hydroxyl group, a lower alkyl group, an aryl group, -NO₂, -CH₂-ONO₂ or -CH₂-OH;

n' and m' are each independently an integer from 0 to 10.

6. (Currently Amended) The compound of claim 1, wherein the compound of Formula

(I) is a compound of Formula (II), or a pharmaceutically acceptable salt thereof,

wherein the compound of Formula (II) is:

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wherein

 R_{n} is

$$(1) \qquad \qquad NO_{2} \qquad (2) \qquad \qquad NO_{2}$$

$$(3) \qquad \qquad NO_{2} \qquad (4) \qquad \qquad NO_{2}$$

$$(5) \qquad \qquad NO_{2} \qquad \qquad (6) \qquad \qquad \qquad NO_{2}$$

$$(5) \qquad \qquad NO_{2} \qquad \qquad \qquad (6) \qquad \qquad \qquad \qquad NO_{2}$$

$$(7) \qquad \qquad \qquad NO_{2} \qquad \qquad \qquad \qquad \qquad NO_{2}$$

$$(8) \qquad \qquad \qquad \qquad NO_{2} \qquad \qquad \qquad NO_{2}$$

$$(9) \qquad \qquad NO_{2} \qquad \qquad \qquad NO_{2}$$

$$(10) \qquad \qquad NO_{2} \qquad \qquad NO_{2}$$

$$(111) \qquad \qquad NO_{2} \qquad \qquad \qquad NO_{2}$$

$$(121) \qquad \qquad NO_{2} \qquad \qquad NO_{2}$$

$$(131) \qquad \qquad NO_{2} \qquad \qquad NO_{2}$$

$$(132) \qquad \qquad NO_{2} \qquad \qquad NO_{2}$$

$$(133) \qquad \qquad NO_{2} \qquad \qquad NO_{2}$$

(17)
$$R_9$$
 NO_2

(19)
$$H_3C$$
 CH_3 O NO_2

$$O_{2}N \longrightarrow O$$

$$O_{2}N \longrightarrow I^{r}$$

(23)
$$O_{NO_2}$$
 OH O_{NO_2} or

R₉ is a lower alkyl group or an aryl group;

 T_2 is oxygen, sulfur, NR_6 or $N(R_{10})(R_{11})$;

R₁₀ and R₁₁ taken together are a heterocyclic ring; and

X₅, R_b and R₆ are as defined herein.

7-26 (Cancelled).

- 27. (Previously Presented) A compound selected from the group consisting of:
- 4-{{(2R)-2,3-bis(nitrooxy)propyl]oxycarbonyl}(2S)-2-aminobutanoic acid, hydrochloride salt;
 - (2S)-2-amino-4-{[2-(nitrooxy)ethyl]oxycarbonyl} butanoic acid, 2,2,2-trifluoroacetic acid;
- (2S)-2-amino-4-[(2-(nitrooxy)ethyl]sulfonyl}ethyl)oxycarbonyl] butanoic acid, hydrochloride salt;

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- (2S)-4-{[(2S)-2,3-bis(nitrooxy)propyl]oxycarbonyl}-2-aminobutanoic acid, hydrochloride salt;
- (2S)-2-amino-4-{N-[3-(nitrooxy)propyl]carbamoyl}butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-{N-[2,2-dimethyl-3-(nitrooxy)propyl]carbamoyl} butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-{[3-(nitrooxy)propyl]oxycarbonyl} butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-(N-{2-[2-(nitrooxy)ethoxy]ethyl}carbamoyl)butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-({2-(nitrooxy)-1-[(nitrooxy)methyl]ethyl} oxycarbonyl)butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-{[2,2-dimethyl-3-(nitrooxy)propyl]oxycarbonyl} butanoic acid, hydrochloride salt; tert-butyl (2S)-2-[(tert-butoxy)carbonylamino]-4-(N-{2-(nitrooxy)-1-

[(nitrooxy)methyl]ethyl}carbamoyl)butanoate;

- (2S)-2-amino-4-{[4-(nitrooxy)but-2-ynyl]oxycarbonyl} butanoic acid, hydrochloride salt
- (2S)-4-{N-[(2S)-2,3-bis(nitrooxy)propyl]carbamoyl}-2-aminobutanoic acid, hydrochloride salt;
- 4-{[(3R)-3,4-bis(nitrooxy)butyl]oxycarbonyl}(2S)-2-aminobutanoic acid, hydrochloride salt;
- (2S)-2-amino-4-({2,2-bis[(nitrooxy)methyl]-3-hydroxypropyl} oxycarbonyl)butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-({2,2-bis[(nitrooxy)methyl]-3-(nitrooxy)propyl}oxycarbonyl)butanoic acid, hydrochloride salt;
- (2S)-2-amino-4-{[4,5-bis(nitrooxy)pentyl]oxycarbonyl} butanoic acid, hydrochloride salt.